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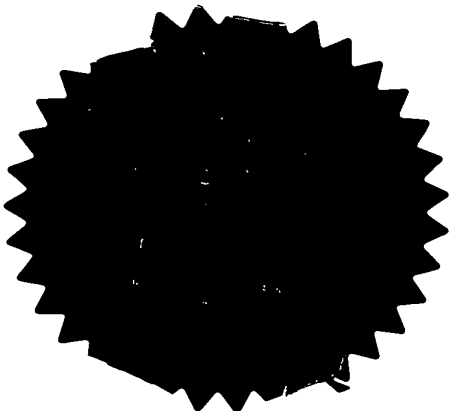


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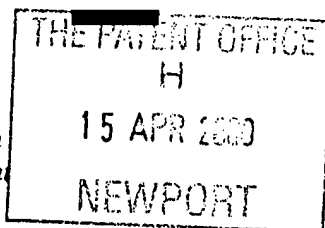
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1. Your reference PHGB 000049
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2. Patent **0009251.0** 15 APR 2000 17APR00 E529820-3 D02879  
(The **0009251.0** P01/7700 0.00-0009251.0
- 
3. Full name, address and postcode of the or of each applicant (*underline all surnames*) KONINKLIJKE PHILIPS ELECTRONICS N.V.  
GROENEWOUDSEWEG 1  
5621 BA EINDHOVEN  
THE NETHERLANDS  
Patents ADP Number (*if you know it*)  
If the applicant is a corporate body, give the country/state of its incorporation THE NETHERLANDS 7419294001
- 
4. Title of the invention MESSAGE DELIVERY SYSTEM
- 
5. Name of your agent (*if you have one*) ANDREW GORDON WHITE  
"Address for service" in the United Kingdom Philips Corporate Intellectual Property  
to which all correspondence should be sent Cross Oak Lane  
(including the postcode) Redhill  
Surrey  
RH1 5HA 713347302
- 
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- | Country | Priority Application number<br>( <i>if you know it</i> ) | Date of filing<br>( <i>day/month/year</i> ) |
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Translations of priority documents  
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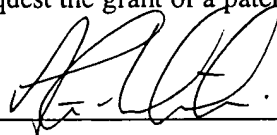
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I/We request the grant of a patent on the basis of this application.

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Date 14-04-00

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## DESCRIPTION

### MESSAGE DELIVERY SYSTEM

5           The present invention relates to methods and apparatuses for delivering data to a user and, in particular, to systems where such data is selected from a larger store automatically and on the basis of a compiled profile of the user.

          An example of such a system is described in European patent  
10   application EP-A-0 944 002 which provides a communications method and a communications network comprising a server and a plurality of user terminals. The user terminals can share information with each other and with the server by means of an interconnecting network, especially the Internet. On the server, a profile database is provided containing data representing a  
15   characteristic behaviour of associated user addresses. The server automatically acquires this representative data in response to activities performed by the associated users of the network, which data is stored with the associated user addresses in the profile database on the server.

          The particular concern with the system of EP-A-0 944 002 is to avoid an  
20   incorrect or inappropriate profile specification being built up for a user and, to this end, the described profile database can be accessed by the user at any time such that the user can modify the content of the database in relation to the contents associated with one of the addresses associated with that user. The user can modify the contents by, for example, adding, deleting, or  
25   amending subject matter in the profile database.

          In accordance with a first aspect of the present invention, there is provided a networked communications apparatus comprising at least one server and a plurality of user stations, wherein the user stations comprise  
30   terminals which can receive information from the at least one server by means of a connection via a first network, the apparatus further comprising:

storage means holding a profile database, which profile database contains data representing a characteristic behaviour of an associated user terminal network address or addresses, the data being acquired automatically in response to an activity of the associated user and being stored together with  
5 the associated user terminal network address or addresses in the profile database;

characterised in that the user station further comprises a portable communications device coupled with said terminal and connectable to said at least one server via a second network, wherein the coupling with said terminal  
10 is by wireless transmission therefrom, and the portable communications device means for receiving wireless transmissions from the terminal are further configured to receive additional data transmitted wirelessly from other sources than said second network.

In a preferred embodiment, the portable communications device may  
15 comprise a mobile telephone with the second network being a telecommunications network. The wireless transmission of additional data suitably conforms to a predetermined set of communications protocols, such as "Bluetooth". The first network may be the Internet and the user terminals may comprise at least a display device coupled with processor means hosting  
20 an Internet browser and user-operable means for control of the same.

The invention also provides a portable communications device for use in the above-described networked apparatus and having means for receiving wireless transmissions from the terminal. The portable communications device may further comprise a buffer arranged to receive and store said additional  
25 data transmitted wirelessly. The device may further comprise a clock signal source and be arranged to stamp items of received additional data with the time of receipt. Also, the device may further comprise user-operable data input means by operation of which the user is enabled to annotate or alter items of received additional data.

30 In accordance with a further aspect of the present invention, there is provided a communication method for a networked system comprising at least one server and a plurality of user stations, wherein the user stations comprise

terminals which can receive information from the at least one server by means of a connection via a first network,

wherein a profile database is provided, which profile database contains data representing a characteristic behaviour of an associated user terminal  
5 network address or addresses, the data being acquired automatically in response to an activity of the associated user and being stored together with the associated user terminal network address or addresses in the profile database;

characterised in that the user station further comprises a portable  
10 communications device coupled with said terminal and connectable to said at least one server via a second network, wherein the coupling with said terminal is by wireless transmission therefrom, and the portable communications device means for receiving wireless transmissions from the terminal are further configured to receive additional data transmitted wirelessly from other sources  
15 than said second network.

According to the method the first network may be the Internet and the received additional data may comprise one or more Uniform Resource Locators. The method may further comprise the provision of a plurality of short range beacons distributed about a geographical location, with each of these  
20 beacons transmitting a respective item of said additional data to the or each portable communications device when it is in range.

Further features and advantages of the present invention will become apparent from reading of the following description of preferred embodiments,  
25 given by way of example only, and with reference to the accompanying drawings, in which:

Figure 1 represents a coupled arrangement of user terminal and portable communications device;

Figure 2 represents an exemplary implementation of messaging beacon  
30 infrastructure;

Figure 3 represents a message format for transmission in a beacon slot in the arrangement of Figure 2;

Figure 4 shows the transmission of messaging slots from a beacon; and Figure 5 represents a combined user terminal and portable communications device and its connection to different services.

5        Figure 1 schematically represents components embodying the present invention and in the form of a networked communications apparatus comprising at least one server or service provider 10 coupled to and a plurality of user stations 12 (only one of which is shown) via a link 14 which may comprise a network connection, cable link, or other data transfer means. The  
10        server 10 includes at least one storage means 16 holding a profile database, which profile database contains data representing a characteristic behaviour of an associated user as identified by their terminal network address or addresses. The server builds up the user profile data by automatically acquiring such data in response to one or several selected activities of the  
15        associated user, such as what television channels they watch, what goods they purchase on-line and so forth. This profiling data is then stored together with the associated user terminal network address or addresses in the profile database.

      The user station further comprises a portable communications device  
20        18, suitably a mobile telephone, coupled with said terminal 12 as indicated by dashed link 20 and connectable to said at least one server or service provider 22 via a second network or data link 24, in this case a telecommunications network. As shown by line 26, the means for automatically acquiring user data (server 10) is coupled to the telecommunications service 22 and may use this  
25        channel via link 20 as a simple low-cost route for user profiling data being gathered from or by the user terminal 12. In order to facilitate this connection, the service provider 10 need simply store the users mobile telephone number with the profiling data for that user in the profile database 16. By use of the portable communications device link for the transfer of user profiling data,  
30        traffic on the first network or link 14 is kept to within manageable levels such that the user does not associate advanced profiling functionality with system delays.

The link 20 between the portable communications device 18 and the respective user terminal 12 may comprise a wireless (radio frequency or infra-red) link. Additionally, the aforementioned data transfer via said wireless link preferably follows a predetermined set of message transfer protocols, such as those known generically as "Bluetooth".

Figure 2 shows one possible implementation of a beacon infrastructure for use in shops, theme parks and so forth, where the beacons B1 - BN transmit additional data messages to a users portable communications device 18. The beacons provide matrix coverage over a series of locales.

Authoring of messages to be transmitted in one or more slots from one or more of the beacons is handled at terminals T1 - TM and may, for example, comprise using a simple html template from the beacon infrastructure server BIS to which the beacons are connected. Slot and frame information is transmitted over secure links, e.g. https, SSL.

Whilst it is expected that the messages will simply be broadcast to whichever mobile devices 18 are within range of a given terminal (with the user then being able to view the message data on the mobile device), response messages sent by the mobile device back to the broadcasting beacon may be supported, as indicated by dashed line 30. In one preferred embodiment, the mobile device 18 is provided with a buffer to build up a log of received messages (optionally time-stamping them on receipt) which messages can then be studied and replied to - for example if containing URL's - at the users leisure. With the buffer, the viewing and responding of messages may be handled by other devices of the user with the captured log being downloaded (e.g. via link 20) when the user is back in the vicinity of these devices.

Services may rent beacon slots from an infrastructure provider, and a typical message form, shown in Figure 3, might comprise:

id	an identifier for the transmitting beacon
SS	an identifier for the Service Supplier
Ci	specification of the Service Class
SD	(optionally) further service details
QoS	specification of Quality of Service



pi one or more connection pointers.

The connection pointers may be prefixed by a pointer type (eg. SMS, 1-800-#,url) One service may have alternative pointers for the mobile to activate the service connection. Various qualities of service may be supported by the same service provider, e.g. SMS, Audio interaction, GPRS, WAP etc. These should also be matched against the users preferences, mobile platform options, and cost preferences.

Each beacon emits, in pulsed mode, a frame of barcode slots offering connection "bridges" to various local services, as represented by Figure 4.

Negotiation for match between profile and appropriateness of service class before service activation with a selected quality of service, QoS, as illustrated by Figure 4.

The chosen QoS should fit the user's context, and acceptable charging rate. Therefore different QoS have different priorities at different times of the user's day.

Before using pointer pi to activate the service connection (which may be made over GSM cellnet, SMS, or even over the rf/ir link, bluetooth) the class ci: (and possibly further details, e.g. QoS) is compared with current subset of the user profile, SUP. SUP may be stored on the mobile (e.g. as a table), or remotely on a web site owned by the user (or provided by the beacon infrastructure provider for end users). The first stages of correlating class ci: and further service details against SUP are imaged to be automatic. These may happen even before the user is notified by the mobile of the presence of a link to that service.

For example if a service of class ci: matches a table of classes held on the mobile, then either: -

- the user is alerted and may with a single key press on the mobile activate the service pointer pi, OR
- the mobile first automatically issues (e.g. via SMS) a request to remote website BS for a more exact correlation between the services details and SUP. If the service is deemed to match the user's current interest and

intent, a positive answer is returned to the mobile and only then is the user alerted by the mobile of the service's presence. The user then has the choice to activate the service automatically via its pointer pi.

5        Figure 5 represents a further arrangement for TV or music-linked services, with an entertainment system (TV, CD Player MP3 jukebox or games platform) being coupled via the mobile device to Cellnet or web-based services.

As before, the "Frame" broadcast by r.f. or i.r. to the mobile may contain  
10 more than one service class, more than one pointer type pi per service offering different QoS and optionally more details of the services on offer.

In the extreme, a service slot might only contain the identity of the music CD currently being played, plus the pointer pi (e.g. to a phone-based music service or web site) being pre-stored on the mobile. On activating the service  
15 via pi, the service is passed the identity of the CD from the beacon slot information, and the music service can be automatically tailored to the current CD.

Although defined principally in terms of a software-based or controlled  
20 implementation, the skilled reader will be well aware that many of the above-described functional features could equally well be implemented in hardware or a combination of software and hardware.

From reading the present disclosure, other modifications will be apparent to persons skilled in the art. Such modifications may involve other  
25 features which are already known in the design, manufacture and use of telecommunications systems and/or data network access apparatus and devices and component parts thereof and which may be used instead of or in addition to features already described herein.

## CLAIMS

1. A networked communications apparatus comprising at least one server and a plurality of user stations, wherein the user stations comprise terminals which can receive information from the at least one server by means of a connection via a first network, the apparatus further comprising:

storage means holding a profile database, which profile database contains data representing a characteristic behaviour of an associated user terminal network address or addresses, the data being acquired automatically in response to an activity of the associated user and being stored together with the associated user terminal network address or addresses in the profile database;

characterised in that the user station further comprises a portable communications device coupled with said terminal and connectable to said at least one server via a second network, wherein the coupling with said terminal is by wireless transmission therefrom, and the portable communications device means for receiving wireless transmissions from the terminal are further configured to receive additional data transmitted wirelessly from other sources than said second network.

2. Apparatus as claimed in Claim 1, wherein said portable communications device comprises a mobile telephone and said second network is a telecommunications network.

3. Apparatus as claimed in Claim 1 or Claim 2, wherein the first network is the Internet and the user terminals comprise at least a display device coupled with processor means hosting an Internet browser and user-operable means for control of the same.

4. Apparatus as claimed in any of Claims 1 to 3, wherein said wireless transmission of additional data conforms to a predetermined set of communications protocols.

5 5. A portable communications device for use in the apparatus of any of Claims 1 to 4 and having means for receiving wireless transmissions from said terminal.

6. A portable communications device as claimed in Claim 5, further  
10 comprising a buffer arranged to receive and store said additional data transmitted wirelessly.

7. A portable communications device as claimed in Claim 6, further comprising a clock signal source and being arranged to stamp items of  
15 received additional data with the time of receipt.

8. A portable communications device as claimed in Claim 5, 6, or 7, further comprising user-operable data input means by operation of which the user is enabled to annotate or alter items of received additional data.  
20

9. A communication method for a networked system comprising at least one server and a plurality of user stations, wherein the user stations comprise terminals which can receive information from the at least one server by means of a connection via a first network,

25 wherein a profile database is provided, which profile database contains data representing a characteristic behaviour of an associated user terminal network address or addresses, the data being acquired automatically in response to an activity of the associated user and being stored together with the associated user terminal network address or addresses in the profile  
30 database;

characterised in that the user station further comprises a portable communications device coupled with said terminal and connectable to said at

least one server via a second network, wherein the coupling with said terminal is by wireless transmission therefrom, and the portable communications device means for receiving wireless transmissions from the terminal are further configured to receive additional data transmitted wirelessly from other sources than said second network.

10. A method as claimed in Claim 9, wherein the first network is the Internet and the received additional data comprises one or more Uniform Resource Locators.

11. A method as claimed in Claim 9 or 10, further comprising the provision of a plurality of short range beacons distributed about a geographical location, with each of said beacons transmitting a respective item of said additional data to the or each portable communications device when it is in range.

12. A networked communications apparatus substantially as hereinbefore described with reference to the accompanying drawings.

13. A portable communications device for use in a networked communications apparatus substantially as hereinbefore described and with reference to the accompanying drawings.

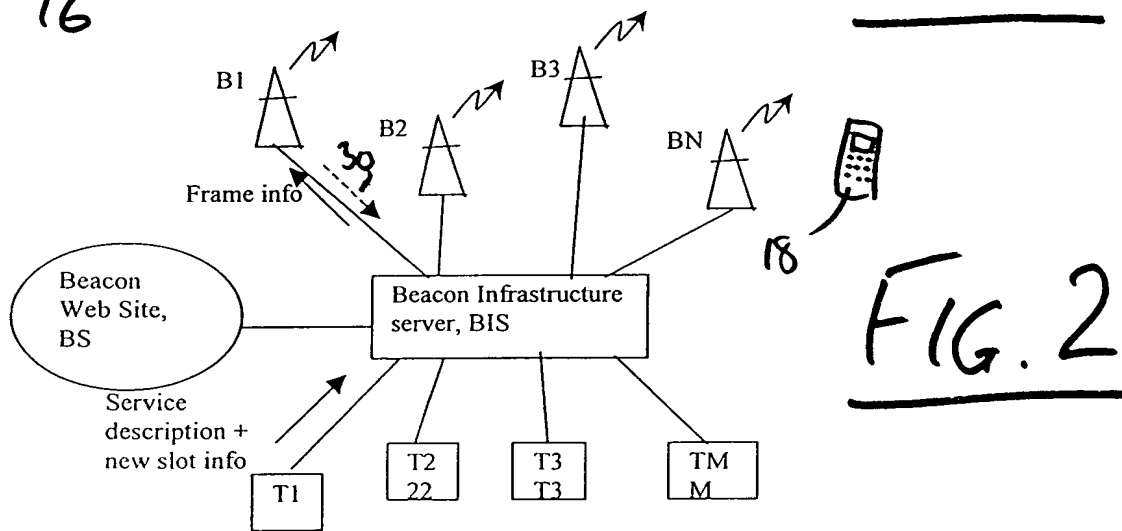
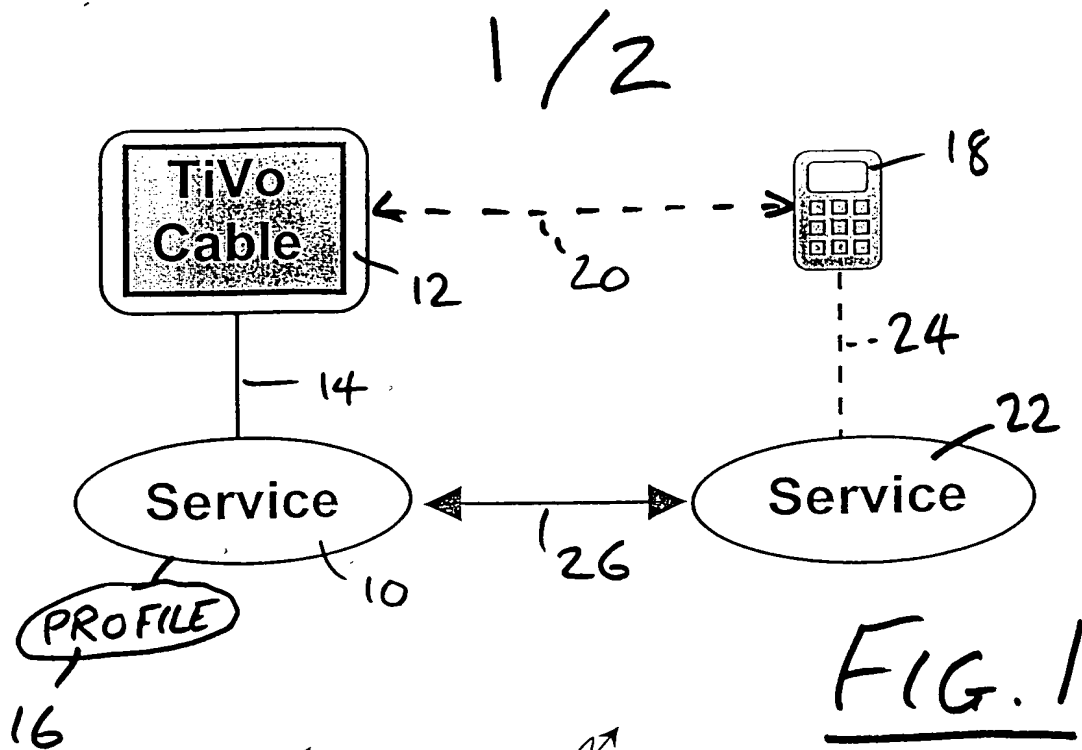
14. A communication method for a networked system substantially as hereinbefore described with reference to the accompanying drawings.

## ABSTRACT

**MESSAGE DELIVERY SYSTEM**

5        In a networked communications apparatus comprising at least one  
server and a plurality of user terminals, together with a portable  
communications device co-operating with one or more user terminals, the  
coupling between terminal and communications device is by wireless  
transmission. The portable communications device means for receiving  
10 wireless transmissions from the terminal are further configured to receive  
additional data transmitted wirelessly from other sources, such as message  
delivery beacons distributed in the locality.

(Fig. 2)



id	SS	Ci	SD	QoS	pi
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FIG. 3

2/2

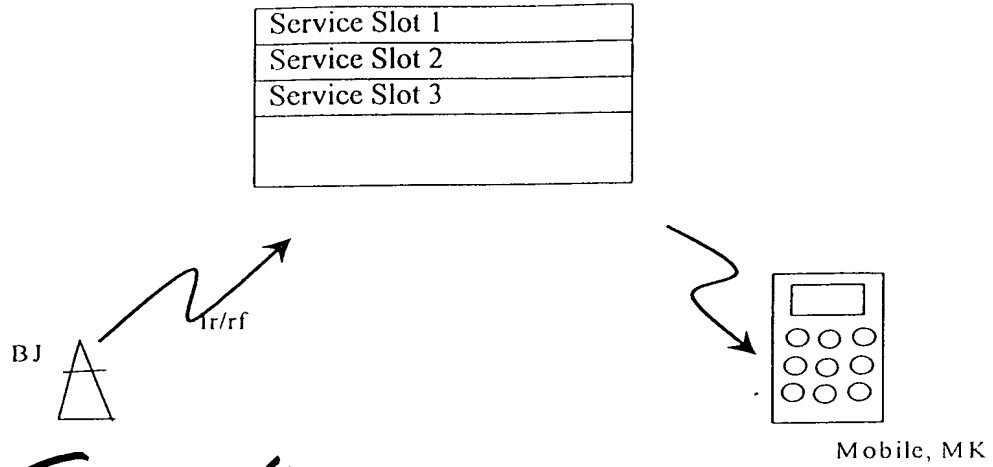


FIG. 4

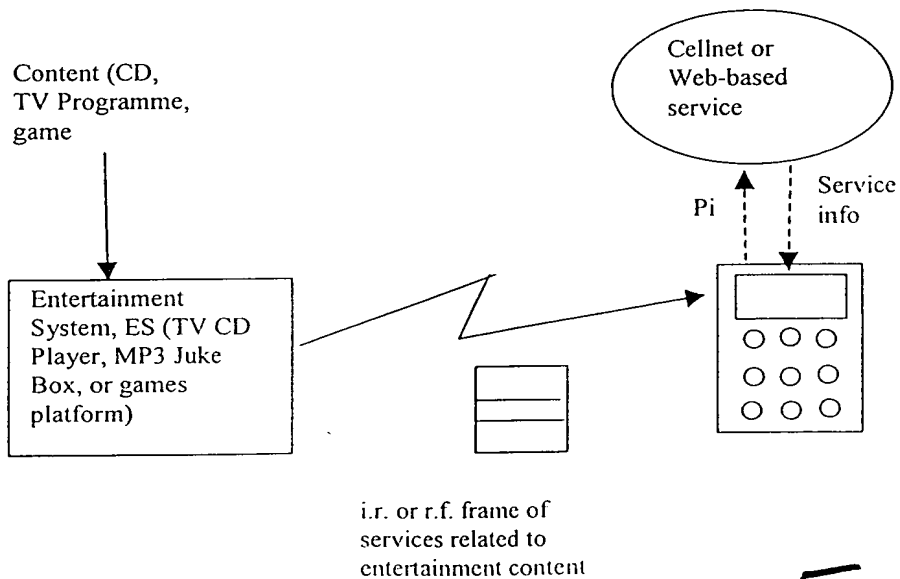


FIG. 5